

# DROUGHT STRESS

## IN TREES: SYMPTOMS AND PREVENTION

Trees respond differently to excessive heat and drought. Some species, like many pines, tulip poplar and sycamore, will drop older foliage to reduce to water loss. Others, like maples and many oaks, keep their foliage on but are thrifty with available water so that many leaves get a scorched appearance, usually around the edges of the leaves. Most of these trees will look poor, but should recover once water is available and temperatures have cooled down.

You may have noticed many of the pines in the sand hills showing bright red foliage. You may think these trees are sick, but they are just shedding their oldest needles to reduce water lost through transpiration. If things stay hot and dry, though, they will suffer, and secondary pests such

as Ips engraver beetles and/or southern pine sawyers may move in to finish them off.

Drought symptoms may show up in many water oaks and southern red oaks. Unlike pine trees, oaks and other deciduous trees only have leaves during the growing season. New foliage can only be produced at great expense to the tree. Continued drought conditions will hit these oaks pretty hard, and we may see many of them wither up this summer.

Trees that have been planted in unnatural environments will also fare poorly if we continue to experience drought conditions this summer. Dogwoods planted in full sun will suffer unless watered. Dogwoods naturally grow in the understory of forests, not in the full sun. Red maples are often planted in urban environments but prefer to grow in wetter soils. They quickly dry up in hot parking lots or unwatered lawns.

Water is key to helping trees survive and is most effective **BEFORE** the trees are stressed. When weather is hot, trees need more water. Watering in the heat of the day can be wasteful because much of the water is lost to evaporation, so it is better to water in the evening. Avoid watering at the base of the tree; many of the roots that absorb water and nutrients are at or beyond the drip line. Applying fertilizers can be counterproductive; stimulating new growth will increase the water requirements of the tree.

Trees are resilient. With a little extra care and the right weather, stressed trees should come out healthy next spring!

Current drought conditions for the state can be found at <https://www.drought.gov/states/south-carolina>.



A longleaf pine shows some of the symptoms of early drought. Pines can afford to lose older needles since they still have younger needles to photosynthesize sugars, but continued drought will spell trouble for them.